



CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 :2005



Job No: CTCE/BBMP/W.No.02/KRIDL/CSR-03/750a/CEMENT/2014-15

Date: 05.03.2015

TEST REPORT ON CEMENT

* CUSTOMER	: Asst. Executive Engineer, Yelahanka Sub Division, BBMP, Bangalore.
* AGENCY	: Technical Manager, KRIDL, Bangalore.
* NAME OF THE WORK	: Improvements to drains and providing Asphaltung to Main and Cross Roads of Yelahanka New Town 5 th Phase in Ward No. 02 of Yelahanka Sub Division, BBMP, Bangalore.
REFERENCE	: AEE/BBMP/YSO/AE-2/2014-15 Dated: 04.03.2015
SAMPLE ID	: Cement - Sample 2
SAMPLE RECEIVED ON	: 04.03.2015
PERIOD OF TESTING	: 04.03.2015 to 05.03.2015



The results of the tests conducted on the cement sample are as follows:

Sl. No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 8112-2013
1	Standard Consistency	IS-4031 (Part-4) 1988(RA-2009)	28.50 %	-
2	a) Initial Setting Time	IS-4031 (Part-5) 1988(RA-2009)	155 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part-5) 1988(RA-2009)	495 Minutes	Not More than 600 Minutes
3	Soundness by Le Chatelier Method	IS-4031 (Part-3) 1988(RA-2009)	1 mm	Not more than 10mm

* Information is furnished by the Customer/Representative.

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Lab No.: CTCE/BBMP/WNo.02/KRIDL/C83-03/780/SAND-Gradation/2014-15

: 05.03.2015

TEST REPORT ON DETERMINATION GRADATION OF FINE AGGREGATES

* Customer : Asst. Executive Engineer, Yelahanka Sub Division, BBMP, Bangalore.
 * Agency : Technical Manager, KRIDL, Bangalore.
 * Name of Work : Improvements to drains and providing Asphaltting to Main and Cross Roads of Yelahanka New Town 5th Phase in Ward No. 02 of Yelahanka Sub Division, BBMP, Bangalore.
 Reference : AEE/BBMP/VSD/AE-2/2014-15 Dated: 04.03.2015
 Technical Reference : IS: 2386 Part 1 - 1963 RA-2007
 Sample ID : Fine Aggregates - Sample 2
 Sample Received on : 04.03.2015
 Date of Testing : 05.03.2015



Total Wt. of Aggregates in gms 1000

Is Sieve Size in mm	Cumulative Weight Passing in %	Spec.Limits as per IS 383-1970 (RA- 2007)			
		Zone-I	Zone-II	Zone-III	Zone-IV
10	100	100	100	100	100
4.75	92.50	90-100	90-100	90-100	95-100
2.36	78.30	60-95	75-100	85-100	95-100
1.18	58.90	30-70	55-90	75-100	90-100
600 Micron	37.70	15-34	35-59	60-79	80-100
300 Micron	13.60	5-20	8-30	12-40	15-50
150 Micron	3.70	0-10	0-10	0-10	0-15

* Information is furnished by the Customer/Representative

Remarks : This sample is under Zone-II specific limits.

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Job No: CTCF/BBMP/W.No.02/KRIDL/CSR-03/780a/AGG/GR/2014-15

: 05.03.2015

TEST REPORT ON COARSE AGGREGATES

* Customer : Asst. Executive Engineer, Yelahanka Sub Division, BBMP, Bangalore.

* Agency : Technical Manager, KRIDL, Bangalore.

* Name of Work : Improvements to drains and providing Asphalt to Main and Cross Roads of Yelahanka New Town 5th Phase in Ward No. 02 of Yelahanka Sub Division, BBMP, Bangalore.

Reference : AEE/BBMP/YSD/AE-2/2014-15 Dated: 04.03.2015

Technical Reference : IS : 2386 Part 1 -1963 RA-2007

Sample ID : Coarse Aggregates (40mm) - Sample 2

Sample Received on : 04.03.2015

Date of Testing : 05.03.2015



Total Wt. of Aggregates in gms= 10000

Is Sieve Size in mm	Cumulative Weight Passing in %	Spec.Limits as per IS 383-1970 (RA- 2007)	
		Graded	Single Sized
80	100	100	-
63	100	-	100
40	96.39	95-100	85-100
20	42.90	30-70	0-20
10	13.04	10-35	0-5
4.75	2.80	0-5	-

* Information is furnished by the Customer/Representative

Remarks : This sample is under Graded specific limits.

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05.03.2015

Job No: CTCE/BBMP/W.No.02/KRIDL/CSR-03/780m/AGG/GR/2014-15

TEST REPORT ON COARSE AGGREGATES

- * Customer : Asst. Executive Engineer, Yelahanka Sub Division, BBMP, Bangalore
- * Agency : Technical Manager, KRIDL, Bangalore
- * Name of Work : Improvements to drains and providing Asphaltung to Main and Cross Roads of Yelahanka New Town 5th Phase in Ward No. 02 of Yelahanka Sub Division, BBMP, Bangalore.

Reference : AEE/BBMP/YSD/AE-2/2014-15 Dated: 04.03.2015

Technical Reference : IS : 2386 Part 1 -1963 RA-2007

Sample ID : Coarse Aggregates (20mm) - Sample 2

Sample Received on : 04.03.2015

Date of Testing : 05.03.2015

Total Wt. of Aggregates in gms = 5000

Is Sieve Size in mm	Cumulative Weight Passing in %	Spec.Limits as per IS 383-1970 (RA- 2007)	
		Graded	Single Sized
40	100	100	100
20	96.12	95-100	85-100
10	29.80	25-55	0-20
4.75	3.32	0-10	0-5

* Information is furnished by the Customer/Representative

Remarks : This sample is under Graded specific limits

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Job No: CICE/BBMP/W.No.02/KRIDL/CSR-03/780a/CUBE/2014-15

17.03.2015

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

* Customer : Asst. Executive Engineer, Yelahanka Sub Division, BBMP, Bangalore.

* Agency : Technical Manager, KRIDL, Bangalore.

* Name of the work : Construction of drains and improvements to roads balance main and cross roads of Susheelanna Layout and Isaq Layout in Ward No. 02 of Yelahanka Sub Division, BBMP, Bangalore.

Reference : AEE/BBMP/VSD/AF-2/2014-15 Dated: 04.03.2015

* Sample ID : Cement Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm²

Technical Reference : IS: 516-1959 (Reaffirmed 2005)

* Grade of Concrete : M₂₀

Compressive Strength as on : 7th day

Sample Received on : 20.03.2015



Sl.No.	* Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm ²)
1	20.03.2015	27.03.2015	8.253	365.2	16.23
2	20.03.2015	27.03.2015	8.186	354.6	15.76
3	20.03.2015	27.03.2015	8.318	381.9	16.97

* Information is furnished by the Customer/Representative

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Job No: CTC/BBMP/WNo.02/KRIDL/STEEL/2014-15

13.03.2015

TEST REPORT ON REINFORCEMENT STEEL

Client : Asst. Executive Engineer, Yelahanka Sub Division, BBMP, Bangalore.

Agency : Technical Manager, KRIDL, Bangalore.

Name of the Work : Improvements to drains and providing Asphaltting to Main and Cross Roads of Yelahanka New Town 5th Phase in Ward No. 02 of Yelahanka Sub Division, BBMP, Bangalore.

Reference : AEE/BBMP/YSD/AE-2/2014-15 Dated: 04.03.2015

Date of Test : 13.03.2015

Technical Reference : IS: 1786-2008



Sl. No	Nominal size (dia) (mm)	Mass per meter (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm ²	Tensile strength (Ultimate stress) N/mm ²	Elongation percent gauge length		
1	10	0.62	514	557	13.35	OK	OK

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Job No: CTE/BBMP/WNo.02/KRIDL/STEE/2014-15

15.03.2015

TEST REPORT ON REINFORCEMENT STEEL

Client : Asst. Executive Engineer, Yelahanka Sub Division,
BBMP, Bangalore.

Agency : Technical Manager, KRIDL, Bangalore.

Name of the Work : Improvements to drains and providing Asphalt to
Main and Cross Roads of Yelahanka New Town 3rd
Phase in Ward No. 02 of Yelahanka Sub Division,
BBMP, Bangalore.

Reference : ARE/BBMP/YSD/AE-2/2014-15 Dated: 04.03.2015

Date of Test : 15.03.2015

Technical Reference : IS: 1786-2008



Sl. No.	Nominal size (dia) (mm)	Mass per meter (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm ²	Tensile strength (Ultimate stress) N/mm ²	Elongation percent gauge length		
1	12	0.89	516	559	13.55	OK	OK

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Job No: CTCE/BBMP/WNo.02/KRIDL/STEEL/2014-15

15.03.2015

TEST REPORT ON REINFORCEMENT STEEL

Client : Asst. Executive Engineer, Yelahanka Sub Division,
BBMP, Bangalore

Agency : Technical Manager, KRIDL, Bangalore

Name of the Work : Improvements to drains and providing Asphalt to
Main and Cross Roads of Yelahanka New Town 5th
Phase in Ward No. 02 of Yelahanka Sub Division,
BBMP, Bangalore.

Reference : AEE/BBMP/YSD/A2-2/2014-15 Date: 04.03.2015

Date of Test : 15.03.2015

Technical Reference : IS: 1786-2008



Sl. No.	Nominal size (dia) (mm)	Mass per meter (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm ²	Tensile strength (Ultimate stress) N/mm ²	Elongation percent gauge length		
1	16	1.58	519	563	13.75	O.K.	O.K.

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Ref No: CICE/BHMP/W/N6.02/KRIDL/GSB-1/GR/2014-15

Date: 10.03.2015

GRADATION FOR GSB (Course Graded-1) IS : 2720 (Part - 4)



Client : Asst. Executive Engineer, Yelahanka Sub Division, BHMP, Bangalore.

Agency : Technical Manager, KRIDL, Bangalore.

Name of work : Improvements to drains and providing Asphaltting to Main and Cross Roads of Yelahanka New Town 5th Phase in Ward No. 02 of Yelahanka Sub Division, BHMP, Bangalore.

Reference : EASE/BHMP/YSD/AE-2/2014-15 Dated: 04.03.2015

Date of Testing : 10.03.2015

Sample Source : Mix Plant Bangalore. Oven Dry Wt (gm) : 25200

TABLE - I

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Specified Limits
75	-	-	-	100	100
26.5	8125	8125	32.24	67.76	55-75
4.75	12185	20310	80.60	19.40	10-30
0.075	4254	24564	97.48	2.52	<10
PAN	636				
Total	25200				

Remarks: Satisfies MORTH Specifications as per Table 400-2, Grading 1

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Job No: CTCE/BBMP/W.No.02/KRIDL/WMM/Gradation/2014-15



18.03.2015

GRADATION FOR WMM MORTH TABLE-400-11

Customer : Asst. Executive Engineer, Yelahanka Sub Division, BBMP, Bangalore.
Agency : Technical Manager, KRIDL, Bangalore.
Name of Work : Improvements to drains and providing Asphaltug to Main and Cross Roads of Yelahanka New Town 5th Phase in Ward No. 02 of Yelahanka Sub Division, BBMP, Bangalore.
Reference : AEE/BBMP/YSD/AE-2/2014-15 Dated: 04.03.2015
Date of Testing : 18.03.2015
Material : WMM
Sample Location : WMM Mix Plant

Oven Dry Wt (gm): 29725

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec. Limits
53	0	0	0	100	100
45	758	758	2.6	97.4	95-100
37.5	5932	6690	22.5	77.5	60-80
30	6354	13044	43.9	56.1	40-60
25	5442	18486	62.2	37.8	25-40
20	4328	22814	76.8	23.2	15-30
15	1965	24779	83.4	16.6	8-22
11.75	3221	28000	94.2	5.8	

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Job No: CTCE/BBMP/W.No.02/KRIDL/BM/Gradation/2014-15

24.03.2015

GRADATION DETERMINATION OF BITUMINOUS MACADAM MIX As per IS2386 and IRC:SP:11-1984

CLIENT	Asst. Executive Engineer, Yelahanka Sub Division, BBMP, Bangalore.
AGENCY	Technical Manager, KRIDL, Bangalore.
NAME OF THE WORK	Improvements to drains and providing Asphaltting to Main and Cross Roads of Yelahanka New Town 5th Phase in Ward No. 02 of Yelahanka Sub Division, BBMP, Bangalore.
REFERENCE	AAE/BBMP/YSD/AE-2/2014-15 Dated: 04.03.2015
SAMPLE I/D	Main and Cross Roads of Yelahanka New Town 5th Phase in Ward No. 02
DATE OF TESTING	24.03.2015



GRADATION AFTER EXTRACTION

Sieve Size in mm	Trail 1				Specified Limits as per MORTH specification table 500-04 (Grading-2)
	Weight Retained, gm	% Retained	% Cumulative Retained	% Passing	
26.5	0	0	0	100	100
19	35.25	7.30	7.30	92.70	90-100
13.2	112.64	23.32	30.62	69.38	56-88
4.75	246.52	51.04	81.66	18.34	15-36
2.36	52.41	10.85	92.51	7.49	4-19
0.3	14.23	2.95	95.46	4.54	2-10
0.075	5.69	1.22	96.67	3.33	0-8

P The results indicated above are based on the tests carried	Trail 2				Specified Limits as per MORTH specification table 500-04 (Grading-2)
	Weight Retained, gm	% Retained	% Cumulative Retained	% Passing	
26.5	0	0	0	100	100
19	32.89	5.92	5.92	93.16	90-100
13.2	105.57	22.11	28.93	71.07	56-88
4.75	243.64	50.55	79.48	20.52	15-36
2.36	49.52	10.27	89.76	10.24	4-19
0.3	20.35	4.22	93.98	6.02	2-10
0.075	9.24	1.52	95.89	4.11	0-8

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Job No: CTC/BBMP/WN02/KRIDL/SDBC/Bitumen/2014-15

27.03.2015

BITUMEN DETERMINATION OF SEMI DENSE BITUMINOUS CONCRETE MIX AS per IRC : SP : 11 - 1984

CLIENT	Asst. Executive Engineer, Yelahanka Sub Division, BBMP, Bangalore.
AGENCY	Technical Manager, KRIDL, Bangalore.
NAME OF THE WORK	Improvements in drains and providing Asphaltting in Main and Cross Roads of Yelahanka New Town 5th Phase in Ward No. 02 of Yelahanka Sub Division, BBMP, Bangalore.
REFERENCE	AE/BBMP/YSD/AE-2/2014-15 Dated: 04.03.2015
SAMPLE 1/D	Main and Cross Roads of Yelahanka New Town 5th Phase in Ward No. 02
DATE OF TESTING	27.03.2015

BITUMEN CONTENT DETERMINATION

Description	Trail 1	Trail 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	474.5	475
3. Weight of Asphalt and Mineral matter Extracted, g	-	-
4. Weight of Mineral Matter, g	-	-
5. Weight of Ash, g	-	-
6. Weight of Bitumen Extracted, g. (corrected)	25.5	25.00
7. Bitumen content in %	5.10	5.00
8. Average	5.05	

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27.03.2015

Lab No: CTCE/BBMP/W.No.02/KRIDL/SDBC/Gradation/2014-15

GRADATION DETERMINATION OF SEMI DENSE BITUMINOUS CONCRETE MIX

As per IS : 2386 and IRC : SP : 11 - 1984

CLIENT	Asst. Executive Engineer, Yelahanka Sub Division, BBMP, Bangalore.
AGENCY	Technical Manager, KRIDL, Bangalore.
NAME OF THE WORK	Improvements to drains and providing Asphaltting to Main and Cross Roads of Yelahanka New Town 5th Phase in Ward No. 02 of Yelahanka Sub Division, BBMP, Bangalore.
REFERENCE	AEE/BBMP/YSD/AE-2/2014-15 Dated: 04.03.2015
SAMPLE I/D	Main and Cross Roads of Yelahanka New Town 5th Phase in Ward No. 02
DATE OF TESTING	27.03.2015



GRADATION AFTER EXTRACTION

Sieve Size in mm	Trail 1				Specified Limits as per MORTH specification table 500-15 (Grading-2)
	Weight Retained, gm	% Retained	% Cumulative Retained	% Passing	
13.2	0	0	0	100	100
9.5	25.16	5.30	5.30	94.70	90-100
4.75	248.75	52.42	57.73	42.27	35-51
2.36	53.29	11.23	68.96	31.04	24-39
1.18	25.43	5.36	74.32	25.68	15-20
0.3	61.28	12.91	87.23	12.77	9-19
0.075	39.65	8.36	95.59	4.41	3-8

Sieve Size in mm	Trail 2				Specified Limits as per MORTH specification table 500-15 (Grading-2)
	Weight Retained, gm	% Retained	% Cumulative Retained	% Passing	
13.2	0	0	0	100	100
9.5	32.86	6.92	6.92	93.08	90-100
4.75	251.42	52.93	59.85	40.15	35-51
2.36	48.37	10.18	70.03	29.97	24-39
1.18	41.57	8.75	78.78	21.22	15-30
0.3	36.23	7.63	86.41	13.59	9-19
0.075	41.18	8.67	95.08	4.92	3-8

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